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**ABSTRACT**

Control of defibrillation therapy delivered by implantable medical devices (IMDs) using hemodynamic sensor feedback is disclosed. The hemodynamic sensor feedback allows for increased control over application of atrial defibrillation therapy. Specifically, the therapy is delivered when a fibrillation episode results in a discrete loss of hemodynamic function. Defibrillation therapy is thus withheld for hemodynamically benign arrhythmias.